

REMARKS

Claims 1, 2 and 5-32 are pending in this application, however, claims 5-14 and 19-26 are withdrawn from consideration due to a restriction requirement. Thus, claims 1, 2, 15-18 and 27-32 are presently under consideration. Claims 1, 15, 29 and 31 are independent claims. By this amendment, claims 1, 15, 17, 18, 29 and 31 are amended and claims 33-36 are canceled. Reconsideration in view of the above amendments and following remarks is respectfully solicited.

Entry of the amendment is proper under 37 CFR §1.116 since the amendment:

(a) places the application in condition for allowance (for reasons discussed herein); (b) do not raise new issue requiring further search and/or consideration (since the amendment amplify issues previously discussed throughout prosecution); (c) satisfy a requirement of form asserted in the previous Office Action; (d) do not present any additional claims without canceling a corresponding number of finally rejected claims; and/or (e) places the application in better form for appeal, should an appeal be necessary. Entry of the amendment is thus respectfully requested.

I. ALLOWABLE SUBJECT MATTER

The Office Action indicates that claims 17 and 18 are objected to as being dependent on a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. However, applicant respectfully submits that all of claims 1, 2, 15-18 and 27-32 are allowable, for at least the reasons set forth below.

II. THE CLAIMS DEFINE PATENTABLE SUBJECT MATTER

The Office Action rejects:

- (1) claims 1, 15, 27, 31, 33 and 34 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,642,174 to Kazui et al. (hereafter Kazui);
- (2) claim 35 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,754,233 to Takashima (hereafter Takashima);
- (3) claims 2, 16, 28 and 32 under 35 U.S.C. §103(a) as being unpatentable over Kazui;
- (4) claim 29 under 35 U.S.C. §103(a) as being unpatentable over Takashima; and
- (5) claims 30 and 36 under 35 U.S.C. §103(a) as being unpatentable over Takashima in view of Kazui.

These rejections are respectfully traversed.

Applicant respectfully submits that both Kazui and Takashima, either individually or in combination, fail to teach or suggest each and every feature as set forth in the claimed invention.

Independent claim 1 recites, *inter alia*, an image retrieval information storing apparatus including a frame feature value generating unit. The frame feature value generating unit generates a frame feature value. The frame feature value is numerical information representing quantity of a feature contained in a frame of image data. The frame feature value is calculated by image data including associated data for transporting, storing or coding the image and is not a component of the image data. A frame feature value storing unit is for storing the frame feature value with corresponding information of the frame feature value to a frame of

the image data. The frame feature value storing unit is connected to said frame feature value generating unit.

Independent claims 15, 29, 31, 33 and 35 recite similar features.

The Office Action alleges that Kazui discloses a frame feature number that corresponds to the claimed frame feature value.

In contrast to the present invention, Kazui discloses a storage device 13 that stores two types of frame numbers: (I) "frame number" indicating a scene change position contained in multiplexed scene information, and (II) "frame number" originally contained in image data. However, the "frame number" mentioned in (I) and (II) do not correspond with the frame feature value in the present invention for at least the following reasons:

According to point 2 in lines 3-8 on page 2, line 17 on page 11 to line 2 on page 12, and point 5 on line 12 of page 5 to line 1 on page 6 in the Office Action, the Examiner alleges that the frame number in Kazui is a numerical expression representing a feature of a frame called a "scene change frame."

However, in the claimed invention, a frame feature value is numerical information representing quantity of a feature contained in a frame of image data, as set forth in claims 1, 15, 29 and 31; and a frame feature value is numerical information representing quantity of a feature contained in a frame of the coded image data, as set forth in claims 29 and 31.

Applicant respectfully submits that the frame feature value of the present invention as defined above is distinguishable from the frame number of Kazui which merely indicates a scene change position. The frame number in Kazui at most may correspond to the index information of the present invention.

Furthermore, Kazui fails to disclose storage of the frame

feature value (the number of blocks for each prediction mode within one frame) generated for detecting scene change.

According to the description on page 10, lines 3-6, and on page 11, lines 17-20 of the Office Action, the Examiner alleges that the frame number originally contained in the coded data of Kazui corresponds to the frame feature value of the present invention. In addition, the Examiner has indicated that the frame number of Kazui is information for identifying the frame and frame type. However, the information for identifying the frame type in Kazui is the frame type information, which is different from the frame number. The frame number in Kazui is simply the information for identifying the frame. Therefore, the frame number originally contained in the image data of Kazui does not correspond with the frame feature value of the present invention. Furthermore, the frame type information originally contained in the image data also does not correspond to the frame feature value of the present invention because it is not numerical information representing quantity of a feature contained in a frame.

The Examiner further asserts that motion vector information originally contained in the image data and stored in storage device 13 of Kazui is one example of numerical representation of quantity of a feature contained in a frame. However, in the present invention the frame feature value is calculated by image data including associated data for transporting, storing or coding the image, and is not a component of the image data, as set forth in claims 1 and 15. Similar features are recited in claims 29 and 31.

As for Takashima, the information used for detecting scene change is residuals of image signals obtained from detecting the motion vector, and the absolute values for the residuals are used for detecting the scene change. Therefore, Takashima is clearly

different from the motion vector frame feature value of the present invention, which is calculated from statistics of the motion vector.

The Examiner alleges that the frame feature value storing unit of the present invention is considered known well within by one skilled in the art. Applicant disagrees with this assertion. In the present invention, a frame feature value storing unit for storing the frame feature value with corresponding information of the frame feature value to a frame of the image data is distinguishable from Takashima.

For example, the frame feature value of the present is not simply buffered in the storage device, but is stored in a prescribed storage position after being associated with the corresponding frame. The feature of the present invention will enable adaptive detection of the feature frame by retrieving the stored frame feature value, and image retrieval with high degree of freedom can be achieved.

According to MPEP §2131, "a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. Of California*, 814 F.2d 628, 631, 2 USPQ2d 1051 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ...claims." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913 (Fed. Cir. 1989). The elements must be arranged as required by the claims, but this is not an *ipsisssimis verbis* test, i.e., identity of terminology is not required. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

Applicant respectfully submits that the Office Action has failed to establish the required *prima facie* case of anticipation

because all of the cited references, Kazui and Takashima, fail to teach or suggest each and every feature as set forth in the claimed invention.

In addition, applicant also respectfully submits that the combination of Kazui and Takashima fail to teach or suggest each and every feature as set forth in the claimed invention.

Applicant respectfully submits that not only does all of the references fail to teach or suggest each and every feature as set forth in the claimed invention, but that one of ordinary skill in the art would not have been motivated to combine/modify the teachings of Kazui and Takashima because there is no teaching or suggestion in any of the references regarding how or why one would modify such systems to arrive at the claimed invention.

Applicant respectfully submits that the amended independent claims are allowable over Kazui and Takashima, either individually or in combination, for at least the reasons noted above.

As for each of the dependent claims not particularly discussed above, these claims are also allowable for at least the reasons set forth above regarding their corresponding independent claims, and/or for the further features claimed therein.

Accordingly, withdrawal of the rejection of claims 1, 2, 15, 16, and 27-36 under 35 U.S.C. §102(b) and 103(a) is respectfully solicited.

III. CONCLUSION

In view of the foregoing, Applicant respectfully submits that the application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

Applicant respectfully petitions under the provisions of 37 C.F.R. §1.136(a) and §1.17 for a two (2) months extension of time

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in which to respond to the Examiner's Office Action. The appropriate Extension of Time Fee is attached hereto.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact Carolyn T. Baumgardner (Reg. No. 41,345) at (703) 205-8000 to schedule a Personal Interview.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment from or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §1.16 or under 37 C.F.R. §1.17; particularly, the extension of time fees.

Respectfully submitted,

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TCB/CTB/mpe

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Attachment: Version with Markings to Show Changes Made

VERSION WITH MARKINGS SHOWING CHANGES MADE

IN THE CLAIMS:

The claims are amended as follows:

1. (Three Times Amended) An image retrieval information storing apparatus, comprising:

a frame feature value generating unit for generating a frame feature value which is [a] numerical [representation of a frame feature based on] information representing quantity of a feature contained in a frame of image data,

wherein said frame feature value is calculated by image data including associated data for transporting, storing or coding the image, and is not a component of said image data; and

a frame feature value storing unit for storing said frame feature value [corresponding to] with corresponding information of said frame feature value to a frame of said image data, the frame feature value storing unit being connected to said frame feature value generating unit.

15. (Three Times Amended) An image retrieving apparatus, comprising:

an index information generating unit for receiving a frame feature value which is [a] numerical [representation of a frame feature corresponding to] information representing quantity of a feature contained in a frame of image data, for determining a featured frame among said image data based on said frame feature value in accordance with a request for extracting a featured frame, and for generating index information which is positional information of said featured frame,

wherein said frame feature value is calculated by image data including associated data for transporting, storing or coding the image, and is not a component of said image data; and

a image retrieval executing unit connected to said index information generating unit, for transmitting said request for extracting said featured frame to said index information generating unit, for receiving said index information from said index information generating unit, for receiving said image data from an external source, and for outputting a frame specified based on said index information,

wherein said index information is adaptively changed by changing a setting of a threshold value during the process of retrieval.

17. (Amended) The image retrieving apparatus according to claim 16, wherein

said index information generating unit includes

a frame determining unit receiving said frame feature value and said request for extracting a featured frame, comparing said frame feature value and [a] the threshold value in accordance with said request for extracting a featured frame, and determining said featured frame, and

an index generating unit connected to said frame determining unit and generating index information which is positional information of said featured frame.

18. (Amended) The image retrieving apparatus according to claim 15, wherein said index information generating unit includes

a frame determining unit receiving said frame feature value and said request for extracting a featured frame, comparing

said frame feature value and [a] the threshold value in accordance with said request for extracting a featured frame, and determining said featured frame, and

an index generating unit connected to said frame determining unit and generating index information which is positional information of said featured frame.

29. (Amended) An image retrieval information storing apparatus, comprising:

a coding information reading unit for reading motion vector information from coded image data;

a frame feature value generating unit, connected to said coding information reading unit, for calculating statistics of motion vectors of said coded image data based on said motion vector information, and for generating a motion vector frame feature value which is [a] numerical [representation of frame feature] information representing quantity of a feature contained in a frame of said coded image data and which is calculated by said statistics of motion vectors; and

a frame feature value storing unit, connected to said frame feature value generating unit, for storing said motion vector frame feature value [corresponding to] with corresponding information of said frame feature value to a frame of said coded image data.

31. (Amended) An image retrieval information storing apparatus comprising:

a coding information reading unit for reading prediction mode information from coded image data;

a frame feature value generating unit, connected to said

coding information reading unit, for counting a number of blocks coded in accordance with respective prediction methods for a frame, and for outputting a prediction mode frame feature value which is [a] numerical [representation of frame feature] information representing quantity of a feature contained in a frame of said coded image data and which is calculated by said number of blocks coded in accordance with respective prediction methods; and

a frame feature value storing unit, connected to said frame feature value generating unit, for storing said prediction mode frame feature value [corresponding to] with corresponding information of said frame feature value to a frame of said coded image data.

Claims 33-36 are canceled.